Course Syllabus: Integrating Music into Multimedia

Instructor: Jeremy Muller, D.M.A.

Fall, 2026

E-mail: jeremy.muller@gatech.edu
https://music.gatech.edu/people/jeremy-muller
Walk-in Office Hours: Fridays 12:30pm-1:30pm or by appointment, please email.
Office: Couch Building 209C (office suite)

Location: West Village Dining Commons 277
Class times: T/Th 12:30pm-1:45pm

Course Description

This class will focus on using game design as a way of integrating music into multimedia. There will be four total projects this semester and we will examine the four DGD1 personality types (first Demographic Game Design model) to use them as guides for the projects. While game design is involved, the goal will be to create music-centered games or interactive installations. This course will involve various topics ranging from animation, generative art, audio manipulation, story-telling, computer graphics, music composition, and more. Our approach will be inter-disciplinary so be curious and inquisitive! For the final project, you and a partner will create a game or multimedia installation to present for our Neo-Arcade event at the end of the semester.

Course Objectives

By the end of this course, you should be able to:

- successfully integrate various mediums of technology into a single interactive multimedia work
- coordinate and work productively with a partner for a shared vision of a music-centered game or interactive installation
- create a finished public-facing deliverable that will be installed during the Neo-Arcade event open to the public and community

Course Materials

Software

My intention for class is for us to *mostly* use software that is free and/or open-source. I expect you will generally use your personal computer to complete course work. We do provide licenses for Max/MSP and Ableton Live via a keyserver if you choose to use any of those tools in your projects. Please keep regular backups of your projects on a backup drive and/or cloud storage service. Lost or damaged files are not an excuse for late work.

We will use some of these tools listed below:

- Processing, open-source software for creative coding
- Max/MSP (MT students can use this with GT license)
- Pure Data open-source audio patching language
  - libpd for Unity (allows embedding Pd into Unity so it will interpret your patches)
- Unity a professional game engine
  - Blender (optional) is a great tool for creating 3D models
- Chunity (Chuck for Unity) is an asset for Unity to embed Chuck into Unity
- openFrameworks, open-source C++ framework for creative coding
  - ofxPd, Pure Data addon for openFrameworks

Policy Statements

Grading Policy

Assignments and Projects are due by the beginning of class **ON THE DUE DATE**. A penalty of one letter grade per day will be applied to all late assignments. Documented illnesses and family emergencies are accepted, of course. Quizzes and exams cannot be made up without a valid, documented excuse.

- **Class Participation, Attendance, Discussions**: 20%
- **Assignments**: 50%
- **Final Project (with partner)**: 30%

Grading Scale

The final grade for the course will be determined by dividing the total points earned by the number of points possible for each of the categories listed in Method of Evaluation. These numbers will be converted into a grade according to the following scale: A=100-90%, B=89-80%, C=79-70%, D= 69-60%, F= 59% and below.

Assignments

There will be three assignments (solo) plus a final project (with a partner) this semester. Each assignment will focus on creating a musical video game. I will give more details in the Assignments section of this course. In general, the assignments will contain not just sound effects but will require you to make a game through various audio/musical techniques:

- Control the player character through audio input
- Give audio feedback to user actions
- Use real-time audio manipulation
- Create a game that intentionally (or incidentally) composes a musical piece

Neo-Arcade Event

Instead of a traditional concert, we will have a Neo-Arcade event at the end of the semester to present your final project to the public. If some of you create a work that's more of an art installation, we will set that up for visitors to see as well. Be prepared to create a polished product that visitors can play or view. As a reminder, the final project will be with a partner so go ahead and think of who you want to partner with and you should be discussing/sketching ideas throughout the semester.

Attendance Policy

Regular attendance is expected and required. Attendance will be taken at each class. You get two unexcused absences (no questions asked) from class before it begins to affect your grade. **YOU MUST ATTEND THE NEO-ARCADE EVENT!**

Expectations for successful completion of the course

If you must miss class or due dates for Institute related activities, religious observances, or due to documented accommodations please make sure to communicate with me BEFORE the due date, so we can make appropriate arrangements.

Please refrain from using a cell phone, tablet, or electronic device during class unless you have been given specific permission. Consider how your use of mobile computing technology in class will affect your own learning and the learning environment of those around you. Limit your use of phones/tablets/laptops during class to class related activities.

Academic Honesty/Integrity Statement

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review the student Code of Conduct and the Academic Honor Code, especially Appendix A: Graduate Addendum to the Academic Honor Code.

Statement about acceptable student conduct

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See Student-Faculty Expectations rules 22 for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Core IMPACTS

This is a Core IMPACTS course that is part of the Arts, Humanities & Ethics area. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals. This course should direct students toward a broad Orienting Question:

- How do I interpret the human experience through creative, linguistic, and philosophical works?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will effectively analyze and interpret the meaning, cultural significance and ethical implications of literary/philosophical texts in English or other languages, or of works in the visual/performing arts.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Ethical Reasoning
- Information Literacy
- Intercultural Competence